REMARKS

In accordance with the examiner's comment as to the correct adjectival form derived from the noun "labyrinth", the word "labyrinthic" has been replaced by "labyrythine".

Much of the final rejection seems to be based on a misreading of the claims submitted previously by the examiner. The examiner reads Claim 1 as amended as requiring"slots that are labyrinthic". This is not what the claim requires. It requires that the slots are disposed to provide a labyrinthic load path. That is to say the slots form the "walls" of the labyrynth and the solid regions provide the path through the labyrinth. This is clear from the drawings. As noted at page 8 lines 28 - 30, the direct load pathway between the lower interface 13 and the upper interface 12 is always interrupted by slots 14. At page 9 line 8 it is pointed out that narrow load passages are shown in Figs 3, 4, 5, 6, 9 and 10. As noted in the following paragraph referring to the load path in the constructions depicted in these figures:

> The only possible pathway for the disturbance is through the six passages between the different levels, therefore through a labyrinthic pathway. That is, the two levels of slots 14 perform the function of attenuating the shockwaves attempting to advance from the lower part 13 of the spacecraft towards the upper part 12 thereof where the payload is located, which is rather sensitive to said shockwaves.

The significance of this is explained on page 10 with reference to Figure 11:

Thus, as can be seen in Figure 11, following it as indicated by the arrow, when the shock disturbance which comes from the lower interface 13 tries to advance towards the upper interface 12, it finds the lower level of slots 14 on which it reflects and advances only when it finds one of the three lower passage areas, see the lower part of Figure 11.

Continuing through these sections and finding the next level of slots 14 preventing passage, one part of the disturbance is reflected in them and another part travels circularly through the structural area between the slots 14, see the intermediate part of Figure 11. When it finally finds the upper passage it has lost an important part of its energy.

Similar results are obtained using slots of a different location and shape in the embodiment of Fig 7 where there is "overlap" between the ends of the slots precluding a direst load path from the lower interface to the upper interface.

Nothing in the prior art points to this requirement for a "non linear" load path between the upper and lowers interfaces of an attenuation device. As noted previousl, there is a fundamental difference between the present invention and that shown in Buder US 2003/0006341. The examiner continues to equate the gaps 20 between the separate supports 17, 18 located in primary reference (US 2003/0006341) with the slots of our claims However, as pointed out previously, these gaps located between separate support

structures (e.g. strcuture 16 and structure 17 not slots in a single device as in the present invention. Additionally, they also extend around the entire periphery of the vibration isolator. The slots of the present invention on the other hand are located within an integral structure and not between supports that have to be fixed together. Moreover, such slots do not extend around the entire periphery of the device and preferably have an undulating configuration as specified in claim 7.

Such a structure is clearly different from that which the applicants have invented.

The key question therefore seems to be whether the limitations in claim 1 are effective to establish this difference. The relevant language is "the slots are disposed so as to provide a labyrinthine load path between upper and lower surfaces of the attenuation device". It is submitted that this language suffices for this purpose. As noted above, the examiner mistakenly applies the adjective "labyrinthine" to the slots rather than the solid content of the attenuation device which provides the load path. It is submitted that the load path is indeed a path that is "continuous and winding" as noted by the examiner.

The advantages of the present structure over Buder were explained in the previous response and will not be repeated her. They are, however, still pertinent.

One particular point made previously should, however, be repeated in view of the examiner's comment that Buder discloses the present basic concept. It does not. As noted at the top of page 2 of the present application, distributions having "excessive axial symmetry" can result in a loss of attenuation and even a possible amplification thereof at

certain frequencies. Buder has total axial symmetry. Buder does not therefore teach the same concept as the present invention where the objective is to dissipate forces that might impact the payload by an asymmetric winding load path. Buder seeks to solve the same problem as the applicant. But his manner of effecting a solution is different. Hew requires multiple units bolted together with elastomer between them, not a single attenuator with slots arranged in a particular way to create a particular load bath. He relies on the elastomer to dampen the vibration. The present invention goes beyond this simple idea and is in no way foreshaddowed in Buder. Nor has the examiner provided any reason why Buder might be modified to produce thae applicant's claimed invention.

None of the secondary references, remedy this fundamental defect in Buder.

Neidhart (US 2819060) simply provides rubber rings extending all the way round conical surfaces disposed in a partially telescoped relationship which act as a buffer. Any damping is provided by the rubber rings. There is no load path equivalent to the labyrintine path of the present invention. There are no slots. The elastomer sits between separate distinct elements that are not otherwise connected with each other. The teaching is therefore not relevant to claim 1 or claims 4, 17 or 18, the last three of which require slots in a surface in which the elastomeric material is located.

Hile (US 2,386,463) is combined with Buder by the examiner in the context of claim 7 . The examiner points to slot 25a of Hile as being relevant. This is not understood.. Feature 25a is a valley forming part of the ridges and valleys of the ridges and valleys in the

washer 15 As far as can be seen from Fig. 3, the valley floor is flat. In any case, Hile certainly does not overcome the basic defect in Buder because it clearly does not disclose an arrangement of slots to set up labyrinthine load paths as required by the present invention. Nor does it disclose slots having a two dimensional undulation.

Brauss (US 5,746,411) again fails to make any contribution toward the basic concept of the present invention. The examiner points to the slots 19 supposedly having relevance to claim13. This is not understood. According to column 3 line 60 and claim 1, feature 19 is a "neck".located between the end surfaces18 of a core 16.

The rejection of claim 14 is unclear. The examiner commences by referring to Lefol, but makes no mention of Lefol in the substantive argument, referring instead to Bruas. It is assumed that Lefol was intended since there seems to be no mention of anythng 'H-shaped' in Bruas. So far as Lefol is concerned, it is again not clear which features the examiner refers to. There are no features 55 and 54 as such in Lefol. Featurees 54a and 54b are blocks of elastomeric material, not slots. Features 55a and 55b are filtering bearing stops apparently forming parts of the elastomeic blocks 54a and 54b. In any case, there are no references to slots at all in Lefol making it difficult to understand the basis for the examiner's rejection.

It is therefore submitted that the present application meets the requirements of 35 USC 103.

In view of the foregoing it is submitted that this application is now in order for

allowance and an early action to this end is respectfully solicited.

Respectfully submitted,

JOHN RICHARDS
C/O LADAS & PARRY LLP
26 WEST 61ST STREET
NEW YORK, NEW YORK 10023
REG. NO. 31053
TEL. NO. (212) 708-1915